

WHAT IS CLAIMED IS:

1. A method for preparing an ink having constituents of a water-soluble dye having a water-soluble solubilizing group of at least one of a sulfonic group and a carboxyl group, water, a water-soluble substance that is condensation-polymerized in the absence of
5 said water, a water-soluble medium and an additive including at least one of an organic acid salt and an inorganic acid salt, comprising:

a first mixing step of mixing at least said dye and said water-soluble substance that is condensation-polymerized in the absence of said water out of said constituents of said ink excluding said additive;

10 a second mixing step of mixing a mixture obtained in the first mixing step and said additive; and

a pH adjusting step, performed before the second mixing step, of preparing a solution including said mixture or a solution including said additive while adjusting said solution to a given pH range by using a pH adjuster.

15 2. The method for preparing an ink of Claim 1,

wherein said solution including said mixture obtained in the first mixing step is prepared while adjusting said solution to the given pH range by using said pH adjuster in the pH adjusting step, and

20 said solution including said mixture and said additive are mixed in the second mixing step.

3. The method for preparing an ink of Claim 1,

wherein said solution including said additive is prepared while adjusting said solution to the given pH range by using said pH adjuster in the pH adjusting step, and

25 said solution including said additive and said mixture obtained in the first mixing step are mixed in the second mixing step.

4. The method for preparing an ink of Claim 1,

wherein said water-soluble substance that is condensation-polymerized in the absence of said water is a hydrolytic organic silicon compound or a partial hydrolysate thereof.

5. The method for preparing an ink of Claim 1,

wherein said water-soluble substance that is condensation-polymerized in the absence of said water is a hydrolytic organic silicon compound having an amino group or a partial hydrolysate thereof.

6. The method for preparing an ink of Claim 1,

wherein a cation of said additive is NH_4^+ .

7. The method for preparing an ink of Claim 1,

wherein said pH adjuster is an alkaline substance.

8. The method for preparing an ink of Claim 7,

wherein said alkaline substance is at least one selected from the group consisting of sodium hydrate, potassium hydrate, ammonia and organic amines.

9. The method for preparing an ink of Claim 1,

wherein the given pH range of said solution adjusted in the pH adjusting step is a pH range of 8 to 11.

10. An ink cartridge used in an ink-jet recording apparatus, comprising:

a cartridge body; and

an ink filled in said cartridge body and having constituents of a water-soluble dye having a water-soluble solubilizing group of at least one of a sulfonic group and a carboxyl group, water, a water-soluble substance that is condensation-polymerized in the absence of said water, a water-soluble medium and an additive including at least one of an organic acid salt and an inorganic acid salt,

wherein said ink is prepared by a preparation method including:

a first mixing step of mixing at least said dye and said water-soluble substance that is condensation-polymerized in the absence of said water out of said constituents of said ink excluding said additive;

5 a second mixing step of mixing a mixture obtained in the first mixing step and said additive; and

a pH adjusting step, performed before the second mixing step, of preparing a solution including said mixture or a solution including said additive while adjusting said solution to a given pH range by using a pH adjuster.

10 11. An ink-jet recording apparatus comprising:

an ink cartridge including an ink filled in a cartridge body and having constituents of a water-soluble dye having a water-soluble solubilizing group of at least one of a sulfonic group and a carboxyl group, water, a water-soluble substance that is condensation-polymerized in the absence of said water, a water-soluble medium and an additive
15 including at least one of an organic acid salt and an inorganic acid salt;

an ink-jet head on which said ink cartridge is loaded for jetting said ink filled in said cartridge body onto a recording medium for image recording; and

transferring means for transferring said recording medium,

wherein said ink is prepared by a preparation method including:

20 a first mixing step of mixing at least said dye and said water-soluble substance that is condensation-polymerized in the absence of said water out of said constituents of said ink excluding said additive;

a second mixing step of mixing a mixture obtained in the first mixing step and said additive; and

25 a pH adjusting step, performed before the second mixing step, of

preparing a solution including said mixture or a solution including said additive while adjusting said solution to a given pH range by using a pH adjuster.